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LSI LOGIC CORPORATION
Office of General Counsel
1551 McCarthy Boulevard
M/S D-106
Milpitas, CA 95035
Fax: (408) 433-7770

Date: May 21, 2004
To **Name:** USPTO – Box: Change of Correspondence Address
Fax: (703) 872-9306
Phone: 703-305-8283

From: **Name:** Manu Kashyap, Intellectual Property Paralegal
Corporate Legal Dept.
Telephone: (408) 433-7475
Fax: (408) 433-7460
Re: 09/842,098

Number of Pages Including this Page 15

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MESSAGE:**US Serial No.: 09/842,098****Filing Date: April 25, 2001****Group Art Unit: 2697****Examiner: Ortiz, J.****Docket Number: 03-2461/CALMP034****Documents Filed: PTO/SB/81 Power of Attorney and Correspondence Address Form; PTO/SB/96 Statement under 37 CFR 3.73(b), Copy of Recorded Assignment and Copy of General Assignment.**

Please notify us immediately if any pages are not received.

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MAY 21 2004

PTO/SB/81 (09-03)

Approved for use through 11/30/2005. OMB 0651-0035

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**POWER OF ATTORNEY
and
CORRESPONDENCE ADDRESS
INDICATION FORM**

Application Number	09/842,098
Filing Date	4/25/2001
First Named Inventor	Dimitri V. Vezenov, et al.
Title	Optical Storage Medium...
Art Unit	2697
Examiner Name	Ortiz, J.
Attorney Docket Number	03-2461/CALMP034

I hereby appoint:

☒ Practitioners associated with the Customer Number:

24319

OR

☐ Practitioner(s) named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:

☒ The address associated with the above-mentioned Customer Number:

OR

☐ The address associated with Customer Number:

OR

☐ Firm or
Individual Name

Address

Address

City

State

Zip

Country

Telephone

Fax

I am the:

☐ Applicant/Inventor.☒ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/98)**SIGNATURE of Applicant or Assignee of Record**

Name Sandeep Jaggi

Signature

Date May 21, 2004

Telephone 408/954-4923

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ *Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/96 (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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STATEMENT UNDER 37 CFR 3.73(b)Applicant/Patent Owner: Calimetrix, Inc.Application No./Patent No.: 09/842,098 Filed/Issue Date: April 25, 2001Entitled: Optical Storage Medium with Virtual Track PitchLSI Logic Corporation

(Name of Assignee)

a Corporation

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or2. ☐ an assignee of less than the entire right, title and interest.The extent (by percentage) of its ownership interest is _____ %
in the patent application/patent identified above by virtue of either:A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

OR

B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:1. From: Dimitri V. Vezenov, et al.To: Calimetrix, Inc.The document was recorded in the United States Patent and Trademark Office at
Reel 012380, Frame 0613, or for which a copy thereof is attached.2. From: Calimetrix, Inc.To: LSI Logic CorporationThe document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

3. From: _____

To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.☐ Additional documents in the chain of title are listed on a supplemental sheet.☒ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

May 21, 2004

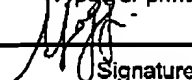
Date

408/954-4923

Telephone number

Sandeep Jaggi

Typed or printed name



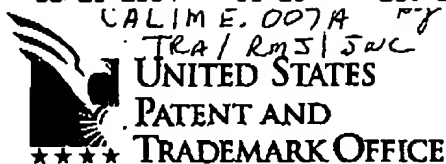
Signature

Chief Intellectual Property Counsel

Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



FEBRUARY 11, 2002

PTAS

KNOBBE, MARTENS, OLSON & BEAR, LLP
THOMAS R. ARNO
SIXTEENTH FLOOR
620 NEWPORT CENTER DRIVE
NEWPORT BEACH, CA 92660

Under Secretary of Commerce For Intellectual Property and
Director of the United States Patent and Trademark Office
Washington, DC 20231
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101924166A

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 12/26/2001

REEL/FRAME: 012380/0613
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

VEZENOV, DMITRI V.

DOC DATE: 11/29/2001

ASSIGNOR:

GUERRA, JOHN M.

DOC DATE: 11/29/2001

ASSIGNOR:

WAN, LEONARD

DOC DATE: 11/29/2001

ASSIGNOR:

SULLIVAN, PAUL F.

DOC DATE: 11/29/2001

ASSIGNOR:

NELSON, KENRIC P.

DOC DATE: 11/29/2001

ASSIGNEE:

CALIMETRICS, INC.
815 ATLANTIC AVENUE, SUITE 105
ALAMEDA, CALIFORNIA 94501-2274



101924166

TO THE ASSISTANT COMMISSIONER FOR PATENTS documents or copy thereof.

1. Name of conveying party(ies): (If multiple assignors, list numerically)

1. Dmitri V. Vezenov
2. John M. Guerra
3. Leonard Wan
4. Paul F. Sullivan
5. Kenric P. Nelson

Additional name(s) of conveying party(ies) attached?
() Yes (X) No

2. Name and address of receiving party(ies):

Name: Calimetrix, Inc.
Internal Address:
Street Address: 815 Atlantic Avenue, Suite 105
City: Alameda State: CA ZIP: 94501-2274

Additional name(s) of receiving party(ies) attached?
() Yes (X) No

3. Nature of conveyance:

- (X) Assignment
() Merger
() Security Agreement
() Change of Name
() Other:

Execution Date: (If multiple assignors, list execution dates in numerical order corresponding to numbers indicated in 1 above) November 29, 2001

4. Application number(s) or Patent number(s):

() Application(s) filed herewith Execution Date(s):

(X) Patent Application No.: 09/842,098
Filing Date: April 25, 2001

() Patent No.:
Issue Date:

Additional numbers attached? () Yes (X) No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Thomas R. Arno
KNOBBE, MARTENS, OLSON & BEAR, LLP
Customer No. 20,995
Internal Address: Sixteenth Floor
Street Address: 620 Newport Center Drive
City: Newport Beach State: CA ZIP: 92660
Attorney's Docket No.: CALIME.007A

7. Total fee (37 CFR 1.21(h)): \$40

(X) Enclosed
() Authorized to be charged to deposit account if any additional fees are required, or to credit any overpayment

8. Deposit account number: 11-1410

Please charge this account for any additional fees which may be required, or credit any overpayment to this account.

6. Total number of applications and patents involved: 1

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct, and any attached copy is a true copy of the original document.

Thomas R. Arno
Name of Person Signing

Signature

12/21/01
Date

40,490
Registration No.

Total number of pages including cover sheet, attachments and document: 5

Mail documents to be recorded with required cover sheet information to:

2/27/2001 ETOM11 00000051 09842098

FC:581

40.00 DP

U.S. Patent and Trademark Office
Attn: Assignment Division
Crystal Gateway-4
1213 Jefferson Davis Highway, Suite 320
Arlington, VA 22202

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120401

Application No.: 09/842,098
Filing Date: April 25, 2001

PATENT
Client Code: CALIME.007A
Page 1

ASSIGNMENT

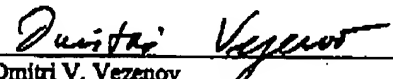
WHEREAS, We, Dmitri V. Vezenov, a Russian citizen, residing at 37 Franconia Avenue, Natick, Massachusetts 01760, John M. Guerra, a United States citizen, residing at 250 Old Marlboro Road, Concord, Massachusetts, 01742, Leonard Wan, a United States citizen, residing at 858 West Roxbury Parkway, Chestnut Hill, Massachusetts 02467, Paul F. Sullivan, a United States citizen, residing at 139 Green Hill Road, Westwood, Massachusetts 02090, and Kenric P. Nelson, a United States citizen, residing at 47 Essex Avenue, Montclair, New Jersey 07042, have invented certain new and useful improvements in a OPTICAL STORAGE MEDIUM WITH VIRTUAL TRACK PITCH for which we have filed an application for Letters Patent in the United States, Application No. 09/842,098, Filed April 25, 2001;

AND WHEREAS, Calimetrix, Inc., a California corporation, with its principal place of business at 815 Atlantic Avenue, Suite 105, Alameda, California 94501-2274, desires to acquire the entire right, title, and interest in and to the said improvements and the said Application:

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to me in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said inventors, do hereby acknowledge that we have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title, and interest throughout the world in, to and under the said improvements, and the said application and all divisions, renewals and continuations thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all rights of priority under International Conventions and applications for Letters Patent which may hereafter be filed for said improvements in any country or countries foreign to the United States, and all Letters Patent which may be granted for said improvements in any country or countries foreign to the United States and all extensions, renewals and reissues thereof; and we hereby authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to us respecting said improvements, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said improvements in all countries.

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 25 day of November, 2001.


Dmitri V. Vezenov

STATE OF

COUNTY OF

ss.

On _____, before me, _____, personally appeared Dmitri V. Vezenov personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

[SEAL]

Notary Signature

RECEIVED: 11/29/01 15:43; -> LASERSHARP CORPORATION; #5771 PAGE 11

Nov 29 01 02:35

Calinetrics

781-275-3322

P. 11

Application No.: 09/842,098
Filing Date: April 25, 2001PATENT
Client Code: CALIME.007A
Page 2IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 29 day of November, 2001.
John M. Guerra

STATE OF

COUNTY OF

}

ss.

On _____, before me, _____, personally appeared John M. Guerra personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

[SEAL]

Notary SignatureIN TESTIMONY WHEREOF, I hereunto set my hand and seal this 29 day of Nov., 2001.
Leonard Wan

STATE OF

COUNTY OF

}

ss.

On _____, before me, _____, personally appeared Leonard Wan personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

[SEAL]

Notary Signature

Nov 29 01 02:08p

Calimetrics

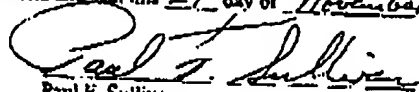
781-275-3322

p. 12

Application No.: 09/842,098
Filing Date: April 25, 2001

PATENT
Client Code: CALIME.007A
Page 3

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 29 day of November, 2001.


Paul F. Sullivan

STATE OF

COUNTY OF

ss.

On _____, before me, _____, personally appeared Paul F. Sullivan personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

[SEAL]

Notary Signature

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this _____ day of _____, 2001.

Kenric P. Nelson

STATE OF

COUNTY OF

ss.

On _____, before me, _____, personally appeared Kenric P. Nelson personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

[SEAL]

Notary Signature

S:\XXX\STRAL\TKA-5834.DOC/mg
ORD001

Application No.: 09/842,098
Filing Date: April 25, 2001

PATENT
Client Code: CALIME.007A
Page 3

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this _____ day of _____, 2001.

Paul F. Sullivan

STATE OF _____

ss.

COUNTY OF _____

On _____, before me, _____, personally appeared Paul F. Sullivan personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

[SEAL]

Notary Signature

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 29th day of November, 2001.

Kenric P. Nelson

STATE OF _____

ss.

COUNTY OF _____

On _____, before me, _____, personally appeared Kenric P. Nelson personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

[SEAL]

Notary Signature

S:\DOCS\TRA\TRA-3834.DOC/mg
open1

TOTAL P. 02

GENERAL PATENT ASSIGNMENT

WHEREAS, Calimetrix, Inc., a California corporation ("Assignor") owns the patents and patent applications listed and described on Schedule A attached hereto (the "Patents"); and

WHEREAS, Assignor and LSI Logic Corporation ("Assignee") have entered into an Asset Purchase Agreement dated November 21, 2003, pursuant to which Assignor has agreed, *inter alia*, to grant to Assignee all of Assignor's right title and interest in and to the Patents and Assignee desires to acquire the entire right, title and interest in and to the Patents.

NOW, THEREFOR, in consideration of the foregoing and the sum of One Dollar (\$1.00), and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor does hereby irrevocably sell, assign, convey and transfer unto Assignee, the entire right, title and interest in and to the Patents, anywhere in the world, including any patents issuing from or based upon all patent applications thereon, any foreign counterparts thereof, and any continuations, continuations-in-part, divisions, reissues or extensions of the foregoing, and including, without limitation, the right to sue for and recover damages for any past, present or future infringement of the foregoing, the same to be held and enjoyed by Assignee for its own use, and for its legal representatives and assigns, to the full end of the term for which patents are granted, as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made.

Assignor agrees to execute, any further papers and to do such other acts as may be necessary and proper, or otherwise required by the Asset Purchase Agreement, to vest full title in and to the Patents in Assignee.

IN WITNESS WHEREOF, Assignor has caused these presents to be duly executed in a manner appropriate thereto as of the 21st day of November 2003.

CALIMETRIX, INC.

By: 

Name: Kenneth C Campbell

Title: President & CEO

ACKNOWLEDGMENT

State of California)
) ss:
County of San Bernardino

On this 20th day of November 2003, before me, the undersigned, personally appeared Kenneth C. Campbell, ☐ personally known to me - OR - ☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature: Donna Reye Anaya (Seal)
Notary Public



SCHEDULE A

Patents and Patent Applications

Issued Patents:

Calimetrics Original Issued US Patents (17)

Patent No.	Title	Inventors	Filing Date	Issue Date
5,818,806	Method and Apparatus for Providing Equalization for the Reading of Marks on Optical Data Storage Media	Wong, Spielman	5/6/1997	10/6/1998
5,854,779	Optical Disc Reader for Reading Multiple Levels of Pits on an Optical Disc	Johnson, B; McDermott; O'Neill; Pietrzyk; Spielman; Wong	1/5/1996	12/29/1998
6,115,348	Information Storage Systems Utilizing Media With Optically Differentiated Data Sites	Guerra	12/24/1997	9/5/2000
6,148,428	Method and Apparatus for Modulation Encoding Data for Storage on a Multi-Level Optical Recording Medium	Welch; Wong; McLaughlin	5/21/1998	11/14/2000
6,249,507	Information Storage Systems Utilizing Media With Optically Differentiated Data Sites	Guerra	8/15/2000	6/19/2001
6,269,080	Programmable Write Signal Generator	Harvey; Swuito	9/9/1998	7/31/2001
6,275,458	Method and Apparatus for Reading and Writing A Multi-Level Signal from an Optical Disc	Wong; Spielman; Lee; Martin	2/18/1999	8/14/2001
6,377,529	Method for Providing Improved Equalization for the Reading of Marks on Optical Data-Storage Media	Lee; Ling; Lo; McLaughlin	6/1/2000	4/23/2002
6,381,724	Method and Apparatus for Modulation Encoding Data for Storage on a Multi-Level Optical Recording Medium	Welch; Wong; McLaughlin	8/22/2000	4/30/2002
6,385,255	Coding system and Method for Partial Response Channels	McLaughlin; Lee; Zingman; Fan	8/6/1999	5/7/2002
6,398,789	Data Storage System and Methods Using Diffractive Near-Field Optics	Guerra; Kendra	2/27/1998	5/28/2002
6,504,807	Programmable Write Signal Generator	Harvey; Swuito	8/7/2001	1/7/2003
6,604,219	DC Control of a Multilevel Signal	Lee, Fan, Lo	2/2/2000	8/5/2003
6,608,807	Generating a Multilevel Calibration Sequence for Precompensation	Lee	2/2/2000	8/19/2003
10/302,761	Programmable Write Signal Generator (allowed)	Harvey; Swuito	11/22/2002	
09/910,454	Method and Apparatus for Reading and Writing A Multi-Level Signal from an Optical Disc (allowed)	Wong; Fan; Lee, Ling, Lo, McLaughlin, McPheters, Martin, Powelson; Spielman; Warland, Zingman	7/19/2002	
09/746,748	Optical Disk Initialization Method and Apparatus (allowed)	Guerra; Vezenov	12/22/2000	

Acquired Issued US Patents (20)

Patent No.	Title	Inventors	Filing Date	Issue Date
5,113,387	THREE LASER OPTICAL DISK DRIVE SYSTEM	Goldsmith, Ziegler	12/12/1989	5/12/1992
5,128,849	OPTICAL DISK STRUCTURES FOR ELECTRON TRAPPING OPTICAL MEMORY MEDIA	Podraczky, Ziegler	12/12/1989	7/7/1992
5,195,082	OPTICAL DISK STRUCTURES FOR ELECTRON TRAPPING OPTICAL MEMORY MEDIA	Revay, Brower, Espin	4/22/1992	3/16/1993
5,537,382	PARTIAL RESPONSE CODING FOR A MULTI-LEVEL OPTICAL RECORDING CHANNEL	McLaughlin, Calderbank, Laroia, Gorpheide	11/22/1994	
5,667,014	M=7(3,7) RUNLENGTH LIMITED CODE FOR MULTI-LEVEL DATA	McLaughlin	5/12/1995	8/12/1997
5,669,310	M=5(0,2) RUNLENGTH LIMITED CODE FOR MULTI-LEVEL DATA	McLaughlin	5/12/1995	8/19/1997
5,669,311	M=6(2,4) RUNLENGTH LIMITED CODE FOR MULTI-LEVEL DATA	McLaughlin	5/12/1995	8/19/1997
5,663,722	M=10(3,6) RUNLENGTH LIMITED CODE FOR MULTI-LEVEL DATA	McLaughlin	5/12/1995	9/2/1997
5,663,723	M=7(1,3) RUNLENGTH LIMITED CODE FOR MULTI-LEVEL DATA	McLaughlin	5/12/1995	9/2/1997
5,668,546	M=6(3,6) RUNLENGTH LIMITED CODE FOR MULTI-LEVEL DATA	McLaughlin	5/12/1995	9/16/1997
5,670,956	M=5(3,7) RUNLENGTH LIMITED CODE FOR MULTI-LEVEL DATA	McLaughlin	5/12/1995	9/23/1997
5,675,330	M=5(4,11) RUNLENGTH LIMITED CODE FOR MULTI-LEVEL DATA	McLaughlin	5/12/1995	10/7/1997
5,680,128	M=6(3,8) RUNLENGTH LIMITED CODE FOR MULTI-LEVEL DATA	McLaughlin	5/12/1995	10/21/1997
5,682,154	M=4(1,2) RUNLENGTH LIMITED CODE FOR MULTI-LEVEL DATA	McLaughlin	5/12/1995	10/28/1997
5,682,155	M=6(4,11) RUNLENGTH LIMITED CODE FOR MULTI-LEVEL DATA	McLaughlin	5/12/1995	10/28/1997
5,748,117	M=8(1,3) RUNLENGTH LIMITED CODE FOR MULTI-LEVEL DATA	McLaughlin	5/12/1995	5/5/1998
5,748,118	M=7(3,8) RUNLENGTH LIMITED CODE FOR MULTI-LEVEL DATA	McLaughlin	5/12/1995	5/5/1998
5,767,293	M=8(1,2) RUNLENGTH LIMITED CODE FOR MULTI-LEVEL DATA	McLaughlin	5/12/1995	5/26/1998
5,781,130	M-ARY (D,K) RUNLENGTH LIMITED CODING FOR MULTI-LEVEL DATA	McLaughlin	5/12/1995	7/14/1998
6,150,964	M=10(2,10), D=3.75 RUNLENGTH LIMITED CODE FOR MULTI-LEVEL DATA	McLaughlin	8/20/1997	11/21/2000

Calimetrics Issued Foreign Patents (2)

Patent No.	Country	Title	Inventors	Filing Date	Issue Date
707392	Australia	Apparatus and Methods for Forming and Use with Variable Pit Depth Optical Recording Media	Wong, Spielman	3/24/1997	8/7/1999 (acceptance to be advertised)
2,249,403	Canada	Apparatus and Methods for Forming and Use with Variable Pit Depth Optical Recording Media	Wong, Spielman	3/24/1997	1/9/2001

Pending Patent Applications:

Calimetries Original US Patents Pending (14)

Serial No.	Title	Inventors	Filing Date
09/373,916	High Density Data Write Strategy	O'Neill; Wong; Balasubrama; Bashaw; Learmonth; McDermott; Narayan; Powelson; Warland; Zhou	8/12/1999
09/476,395	Method and Format for Reading and Writing in a Multilevel Optical Disc System	Wong; Lewis; Lee; Ling; Pope; Spielman; Zingman	9/16/2003
09/496,898	Write Compensation for a Multi-Level Data Storage System	Powelson; Warland	2/2/2000
10/171,394	Advanced High Density Data Write Strategy	Balasubramanian; Hieslmair; Narayan; Powelson; Stinebaugh; Warland; Zhou	6/12/2002
09/828,311	Digital Automatic Gain Control of a Multilevel Optical Disc Read Signal	Lo; Lee; Powelson; Spielman	4/6/2001
09/872,486	Synchronization in Multilevel Optical Data Storage	Lee; Spielman; Zingman; Lewis	5/31/2001
10/012,257	Write Compensation for Data Storage and Communication System	Powelson; Warland; Harvey; Lo; Pepin; Spielman; Zhou; Zingman; Lee	11/8/2001
09/823,852	High Density Analog Recording	Miyagawa; Mansuripur	3/29/2001
09/842,214	Method of Fabricating Sub-Micron Hemispherical and Hemicylindrical Structures from Non-Spherically Shaped Templates	Vezenov; Guerra; Wan; Sullivan	4/25/2001
09/842,098	Optical Storage Medium with Virtual Track Pitch	Vezenov; Guerra; Wan; Sullivan; Nelson	4/25/2001
10/057,774	Advanced Forward Error Correction	McLaughlin; Thangaraj	1/22/2002
10/387,232	Secure Data Storage	Wong; Harvey; Lee; Lewis; Spielman; Tan; Warland	3/11/2003
10/455,756	DC Control of a Multilevel Signal	Lee; Fan; Lo	6/5/2003
10/608,890	Generating a Multilevel Calibration Sequence for Precompensation	Lee	6/26/2003

Calimetrics Foreign Patents Pending (7)

App. No.	Country	Title	Inventors	Filing Date
97917035.4	Europe	Apparatus and Methods for Forming and Use with Variable Pit Depth Optical Recording Media	Wong and Spielman	3/24/97
33584/00	Australia	Method and Apparatus for Reading and Writing in a Multilevel Optical Disc	Wong; Fan; Lee, Ling, Lo, McLaughlin; McPheters, Martin, Powelson; Spielman; Warland, Zingman	2/8/2000
2,356,858	Canada	Method and Apparatus for Reading and Writing in a Multilevel Optical Disc	Wong; Fan; Lee, Ling, Lo, McLaughlin; McPheters, Martin, Powelson; Spielman; Warland, Zingman	2/8/2000
911733.4	Europe	Method and Apparatus for Reading and Writing in a Multilevel Optical Disc	Wong; Fan; Lee, Ling, Lo, McLaughlin; McPheters, Martin, Powelson; Spielman; Warland, Zingman	2/8/2000
2000-600,264	Japan	Method and Apparatus for Reading and Writing in a Multilevel Optical Disc	Wong; Fan; Lee, Ling, Lo, McLaughlin; McPheters, Martin, Powelson; Spielman; Warland, Zingman	8/10/2001
10-2001-7010512	Korea	Method and Apparatus for Reading and Writing in a Multilevel Optical Disc	Wong; Fan; Lee, Ling, Lo, McLaughlin; McPheters, Martin, Powelson; Spielman; Warland, Zingman	8/18/2001
200104098-9	Singapore	Method and Apparatus for Reading and Writing in a Multilevel Optical Disc	Wong; Fan; Lee, Ling, Lo, McLaughlin; McPheters, Martin, Powelson; Spielman; Warland, Zingman	2/8/2000